

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A hydraulic coupling system, comprising a pump; a clutch assembly including an actuator and a multi-disk clutch pack coupled to the actuator, the pump pressuring a fluid in the actuator to engage the clutch pack and pumping the fluid through the clutch pack to cool the clutch pack; a pressure control communication with a reservoir, the actuator and the clutch pack valve for maintaining the fluid pumped to the actuator at a higher pressure than the pressure of the fluid pumped through the clutch pack to cool the clutch; and a controller which transmits pulse-width modulated control signals to the pump to control the operation of the pump and pulse-width modulated control signals to the valve to control the operation of the valve.
2. (Cancelled)
3. (Cancelled)
4. (Original) The system of claim 1 further comprising a two-way valve which provides a preload pressure to the system when the pump is not operating and the clutch pack is disengaged.
5. (Original) The system of claim 1 further comprising a pilot valve which provides a preload pressure to the system when the pump is not operating and the clutch pack is disengaged.
6. (Original) The system of claim 1 further comprising an accumulator for compensating for fluid leakage in the system.

7. (Original) The system of claim 1 wherein the pump is a gerotor, vane or gear pump.